To: Ellis, Steve G[steve.g.ellis@amecfw.com]

From: Black, Ned

**Sent:** Thur 4/27/2017 10:28:20 PM

Subject: RE: Leviathan and Iron Mtn Mines sampling coordinates?

Hi Steve,

Ahh, youthful indiscretions. In the early days of Leviathan sampling there was some confusion about site names owing to multiple legacy sampling plans with differing nomenclature. I created a rectified list for myself many years ago but I guess I didn't send it to you previously. First though, if you have two sets of coordinates for a site, they are probably the bottom and top of each sampling reach. I collected the sediment samples at the bottom (downstream) end of each reach, so you can look at google maps (or whatever GIS platform you use) and pick the downstream location for every pair of coordinates. Or send me the list and I'll do it. Second, I didn't collect the samples in June of 2000 but I suspect some of the samples you mention below were actually September 2000 or June 2001. Nonetheless:

Bryant at Barney Riley Creek or Barney River was actually the Stateline site.

Bryant Box Culvert was Bryant below Confluence, aka Station 25. If you go there in the real world you'll see this location is just upstream from a rectangular culvert passing under Leviathan Mine Road.

Alpine Creek was a duplicate of Aspen Creek, Station 16, in Sept, 2000 but it was a duplicate of Leviathan above Mountaineer, Station 23, in June 2001.

For the rest, as I said above, the sediments samples were collected at the downstream end of the reach.

In case you're going through the data in chronological order and you haven't progressed beyond 2001, Alpine Creek was a duplicate of:

Aspen Creek Station 16 in June 02,

Leviathan above Mountaineer Station 23 in June 03.

Leviathan above Mountaineer Station 23 in Sept 03,

Leviathan Station 15 in June 04.

Leviathan Station 15 in Sept 04.

After that duplicates should be unambiguously labeled.
And water samples were collected at the upstream end of each sampling reach.
Cheers,
ned
ned black, ph.d.
us epa r9
regional cercla ecologist
415-972-3055
From: Ellis, Steve G [mailto:steve.g.ellis@amecfw.com] Sent: Thursday, April 27, 2017 11:15 AM To: Black, Ned <black.ned@epa.gov> Subject: RE: Leviathan and Iron Mtn Mines sampling coordinates?</black.ned@epa.gov>
Hi Ned:
Is there a way to tell which sampling location was sampled for sediments when there are two sets of coordinates? For example, during the June and September 2000, the following locations are listed:

Bryant at Barney River (I believe is Barney Riley Ck.) (Jun 2000) No coordinates

Bryant at Box culvert (Jun 2000) Possibly one of the Bryant below Confluence Locations?

Alpine Ck. (Jun 2000) Field dup for one of the two Aspen above Leviathan coordinates?

Leviathan above Mountaineer (Jun 2000) One of the two sets of coordinates for this location

name?

Mountaineer above Leviathan Jun 2000) One of the two Mountaineer Reference locations?

Leviathan above Aspen (Jun 2000) One of the two sets of coordinates for this location?

Aspen above Leviathan (Sep 2000) One of the two sets of coordinates for this location?

Thanks for your help!

Steve

Steve Ellis Ph.D.

Principal Scientist, Lynnwood/Seattle, Amec Foster Wheeler

3500 188th Street SW, Suite 601, Lynnwood, WA, USA

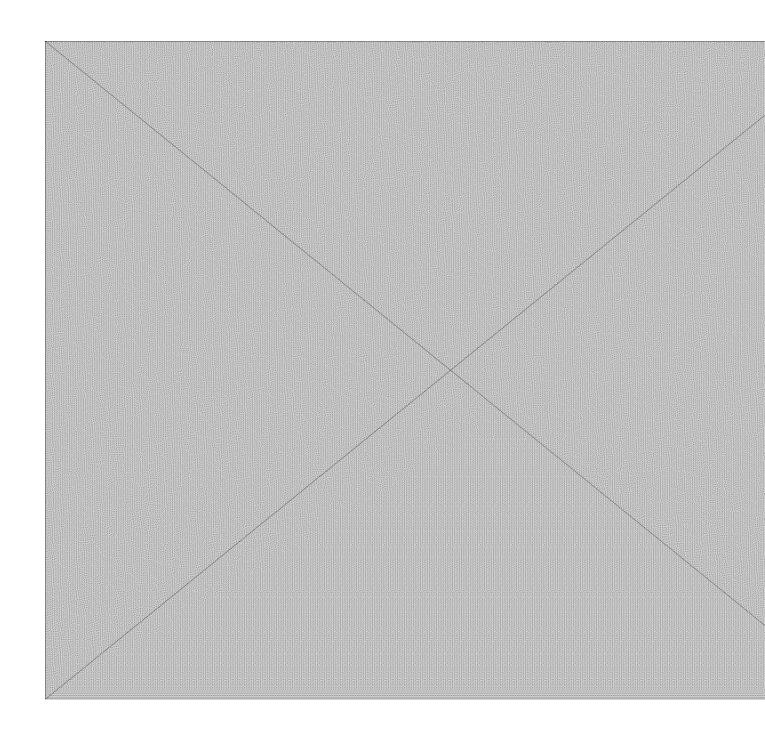
O +1 (425) 921 4000 D +1 (425) 921 4022 M +1 (206) 919 0683

steve.g.ellis@amecfw.com-- amecfw.com\_

From: Black, Ned [mailto:Black.Ned@epa.gov]
Sent: Wednesday, October 12, 2016 4:03 PM
To: Ellis, Steve <Steve.Ellis@amec.com>

Subject: FW: Leviathan and Iron Mtn Mines sampling coordinates?

Hi Steve,
Thought I'd already forwarded this to you. I still don't have coordinates for Leviathan 4L. As far as sampling depth, it was always surface grabs, 0 to 3 cm into the sediments.
ned
ned black, ph.d.
us epa r9
regional cercla ecologist
415-972-3055
From: Husby, Peter Sent: Wednesday, September 28, 2016 11:12 AM To: Black, Ned < Black. Ned@epa.gov >; Nagle, Greg < Nagle. Greg@epa.gov > Subject: RE: Leviathan and Iron Mtn Mines sampling coordinates?
Ned,
I think they are in a few reports, but here is a table I found. This does not have Leviathan above 4L, which I can't find. Maybe Greg has them.



From: Black, Ned

Sent: Wednesday, September 28, 2016 10:42 AM

**To:** Nagle, Greg < Nagle.Greg@epa.gov > Cc: Husby, Peter < Husby.Peter@epa.gov >

Subject: FW: Leviathan and Iron Mtn Mines sampling coordinates?

Yo	Gerg.
~ ~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

- 1. Per the email below, ARCO would like us to supply GPS coordinates for our Leviathan Mine sampling sites. When we first took over the sampling 2008 we redid the p-hab for all the sites (either in 2008 or 2009). I'm hoping we did GPS and you have the data. Or Peter does.
- 2. Sometime I still need any GPS you have for out Iron Mountain bioassessment sites from June 1-4, 2015.

Thnx,
ned
ned black, ph.d. us epa r9
regional cercla ecologist 415-972-3055
From: Ellis, Steve [mailto:steve.ellis@amecfw.com]

Sent: Tuesday, September 06, 2016 7:34 AM

To: Black, Ned < Black. Ned@epa.gov>

Subject: RE: Leviathan Mine sampling coordinates

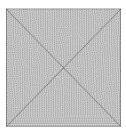
Hi Ned:

I would definitely like to receive the data since 2013. Thanks for your efforts to dig up the coordinates!

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ು	LUVU	

Steve Ellis Ph.D.
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Steve.Ellis@amecfw.com amecfw.com_
From: Black, Ned [mailto:Black.Ned@epa.gov]  Sent: Thursday, September 01, 2016 2:03 PM  To: Ellis, Steve < Steve. Ellis@amec.com >  Subject: RE: Leviathan Mine sampling coordinates
Hi Steve,
I'll have to dig a bit to find the GPS coordinates. The last time I know they were measured was probably 6 years ago when we redid the physical habitat assessment of all the bioassessment reaches.
Do you want my water and sediment data collected since 2013 or do you already have it?
And the sediments were surface scoops collected opportunistically from the finest grain sediments I could find at the sampling sites. Depth would be 0 to 3 cm.
Cheers,
ned

ned black, ph.d. us epa r9 regional cercla ecologist 415-972-3055 From: Ellis, Steve [mailto:steve.ellis@amecfw.com] Sent: Tuesday, August 30, 2016 12:56 PM To: Black, Ned < Black. Ned@epa.gov> Subject: Leviathan Mine sampling coordinates Hi Ned: Previously you have sent me the water and sediment you collected from 2001 through 2013. We would like to add the data to our project database to be able to make comparisons with the data Atlantic Richfield is collecting for the RI/FS. The data sheets I have do not have any GPS coordinates for the sampling locations. I was wondering if that data is available. In addition, could you provide the sample depth for the sediment data. Any help is greatly appreciated. Steve Steve Ellis Ph.D. Principal Scientist, Lynnwood/Seattle, Amec Foster Wheeler 3500 188th Street SW, Suite 601, Lynnwood, WA, USA O +1 (425) 921 4000 D +1 (425) 921 4022 M +1 (206) 919 0683



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